W. K. KETTLITZ

TRANSVAAL DEPARTMENT OF
NATURE CONSERVATION,
PRETORIA.

The distribution of some of the larger game mammals in the Transvaal (excluding the Kruger National Park)

Most of the Transvaal has been surveyed and divided into separate farms, the majority of which are ring-fenced. Probably, therefore, the old migrations of game have stopped. In some places, the natural game has disappeared and a slow process of restocking is now taking place, especially with Blesbok and Springbok, and to a lesser degree with Impala, Blue Wildebeest, Zebra and Black Wildebeest.

It cannot yet be established what the effect on numbers and density of certain species will be after the total fencing of the western boundary of the Kruger National Park. The full effect of this and of the subsequent fencing of the privately owned Sabi Sand Wildtuin and the Timbivati Game Reserve will be apparent within the next few years.

As far as the distribution and present status of mammals in the Kruger National Park is concerned, the student should refer to the Biologist's Report (Anon, 1960), in which a comprehensive summary is to be found.

Where the position of game in the rest of the Transvaal in 1953 is mentioned in this paper, it has direct bearing on a previous survey. (W. K. Kettlitz 1954.)

On the accompanying maps the distribution of herds and, in some cases, the density of the species, or both, is shown. However, no attempt has been made to allocate certain numbers to each symbol on the maps, as it is difficult to do so in all the districts taken together. The actual occurrence of herds, whether small or large gives a clearer idea of distribution than estimates of actual numbers.

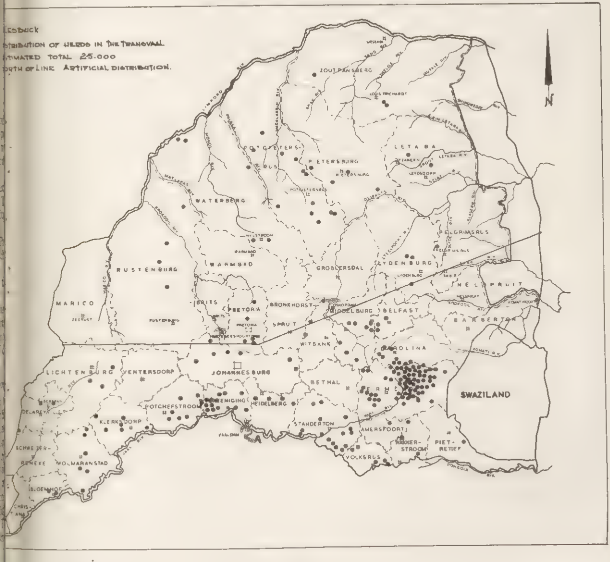
BLESBOK *Damaliscus albifrons*

The distribution of this species is interesting, as we have its natural habitat with the heaviest population in the south-eastern-districts, with Ermelo as the centre. Numbers gradually diminish towards the south-western districts. This natural distribution is indicated by a line on the map. The herds to the north of that line have been artificially introduced. Thus, during the last ten years the distribution has been extended so that Blesbok are now found in all parts of the Transvaal, but highest densities still remain in the south-eastern districts. This artificial distribution has given new values to the Blesbok. In bushveld and lowveld areas it is expensive to erect fences which will retain popular natural game such as Kudu and Impala. Blesbok, however, can be confined by ordinary fences and seem to thrive in these new surroundings where it was formerly believed they would not survive. This animal is not very selective and is at present not considered to compete with animals which occur naturally.

Ann. Cape Prov. Mus. II. 1962. South Africa.

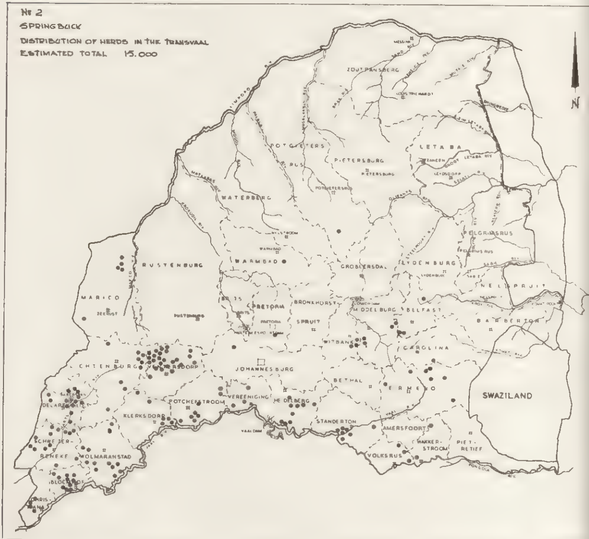
Some conservationists do not agree with the introduction of wild animals into habitats where they do not or did not occur naturally. Where it is uneconomic to re-establish and *keep* natural species, their preservation depends solely on their aesthetic value and the aims of conservation may be lost. The Blesbok is not an exotic species and its habits are more or less known. Thus, where game is becoming a factor in ordinary farming practice, and because Blesbok can virtually be controlled like other farm stock, the species is very seldom kept for aesthetic purposes only, and its economic value is becoming increasingly prominent.

There are approximately 25,000 Blesbok in the Transvaal and the distribution pattern may be expected to change from time to time as long as it is spread artificially. (Fig. No. 1).



Springbok *Antidorcas marsupialis marsupialis*

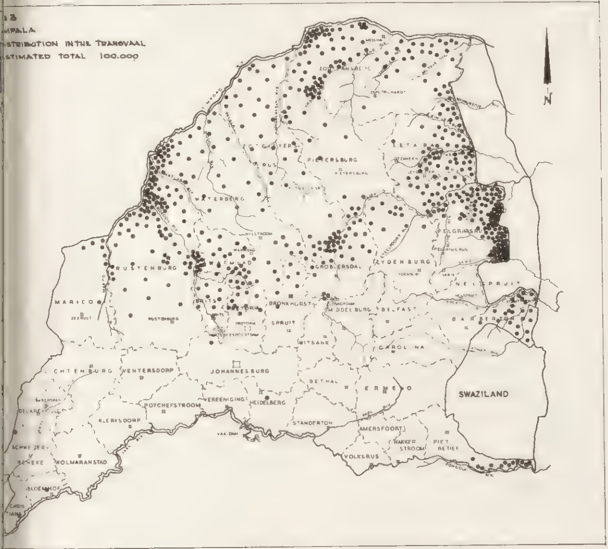
The distribution of the Springbok still conforms to its natural pattern except in the central area known as the Springbok Flats. As this animal does not easily survive in heartwater areas and is not as easy to keep alive during capture and transport as the Blesbok, it has not escaped its natural habitat boundaries. The heaviest population is still in the south-western districts, diminishing towards the south-east. There are approximately 15,000 Springbok in the Transvaal. (Fig. No. 2).



IMPALA *Aepyceros melampus melampus*

The distribution of Impala in the Transvaal has more or less remained the same as it was in 1953, although densities in some areas have diminished. Places where the populations have decreased considerably during the past ten years are the north-western Limpopo region, areas of the Komatipoort and Pongola (south of Swaziland) and the Klaserie valley in Pilgrim's Rest district. All these have become highly cultivated regions, farms have been subdivided and the game consequently reduced.

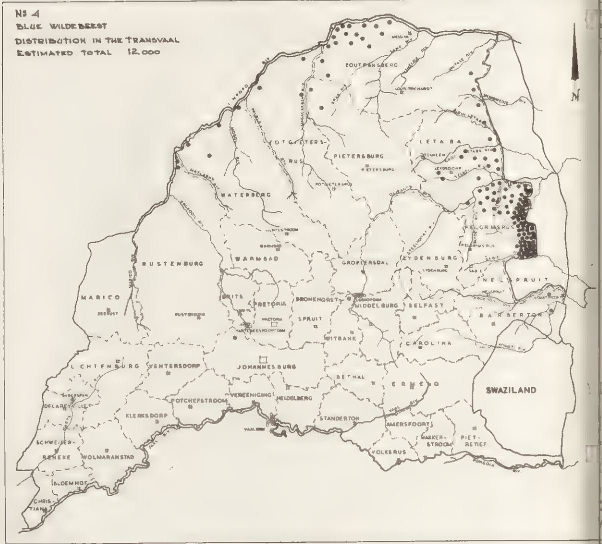
Some artificial dissemination has taken place. Introduction into previously unpopulated areas has been achieved with some success. For instance, in the western Transvaal



where we stocked Impala about ten years ago, they did extremely well and the bloom of the herd has been phenomenal. It was also found in this particular area that competition for feed between Impala and the local species is not heavy as Impala make use of the old diggers' trenches which are not used by the local species. A rough estimate of their numbers in the Transvaal is approximately 100,000. (Fig. No. 3).

BLUE WILDEBEEST *Gorgon taurinus taurinus*

The distribution of this species remains much the same as in 1953. Pilgrim's Rest district has the densest population, but numbers are slowly decreasing on account of intensified

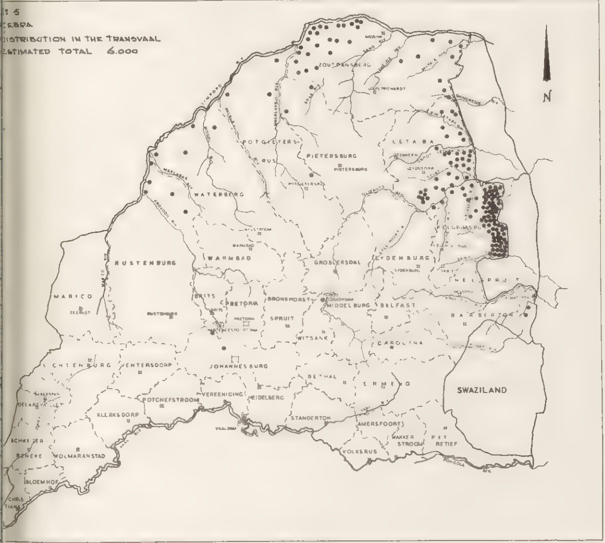

No 4
BLUE WILDEBEEST
DISTRIBUTION IN THE TRANSVAAL
ESTIMATED TOTAL 12.000

farming activities during the past ten years. The species has almost vanished in the Barberton district and numbers are becoming very low in the Rustenburg, Waterberg, Potgietersrust, Soutpansberg and Letaba districts. The "snotsiekte" disease, formerly unknown where cattle and the eastern Wildebeest mixed, has now become a real danger and some ranchers are in favour of exterminating Wildebeest on account of it. A rough estimate of Wildebeest is less than 10,000. (Fig. No. 4).

ZEBRA *Equus burchellii transvaalensis*

Distribution remains much as in 1953, with the highest densities in the Pilgrim's Rest,

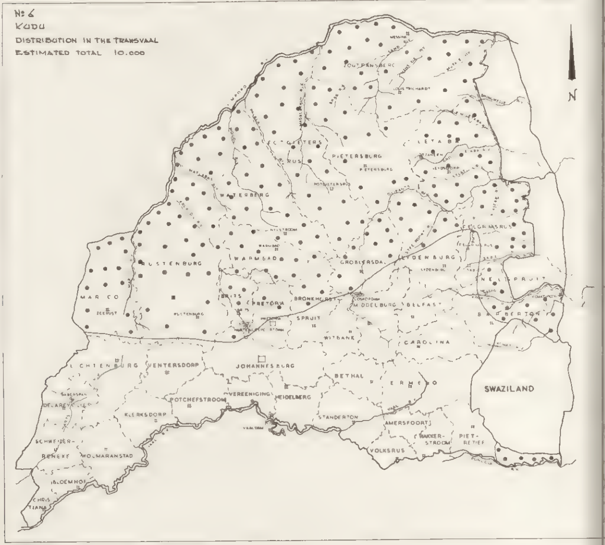
: 5
EBRA
ISTRIBUTION IN THE TRANSVAAL
STIMATED TOTAL 6.000



Letaba and Soutpansberg districts. Where these animals compete with cattle in ranching areas they are slowly being eliminated. The numbers in the western districts are becoming very low. Some introductions in the central Transvaal have taken place. The estimated number in the Transvaal does not exceed 6,000 with less than 1,000 in the western districts. (Fig. No. 5).

KUDU *Strepsiceros strepsiceros strepsiceros*

This ungulate is distributed evenly over the whole bushveld and lowveld of the Transvaal. They are most numerous in places where the type of vegetation gives good cover or where they are afforded vigorous protection by owners. In new settlements Kudu do

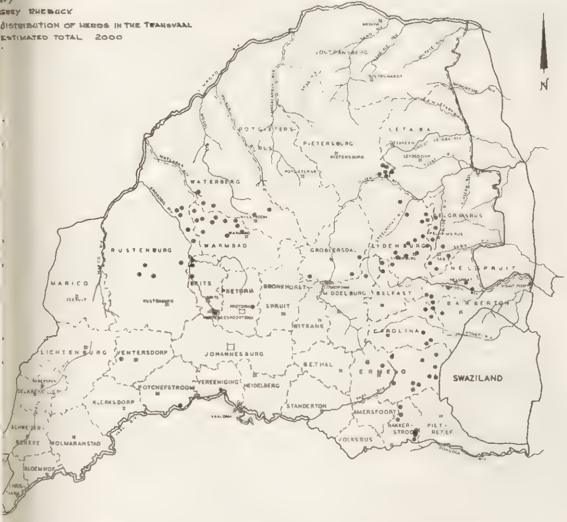

No 6
KUDU
DISTRIBUTION IN THE TRANSVAAL
ESTIMATED TOTAL 10.000

much damage to cultivated crops and many of them are destroyed while causing damage. They seem, however, to hold their own against heavy hunting pressure, which may be attributed to their shyness, speed and wonderful camouflage.

They move about so much from farm to farm that it is difficult to estimate numbers. High figures are recorded in game surveys and censuses, but I doubt whether the total reaches the 10,000 mark. (Fig. No. 6).

GREY RHEBUCK (VAALRIBBOK) *Pelea capreolus*

This animal is distributed over the central and south-eastern districts of the Transvaal



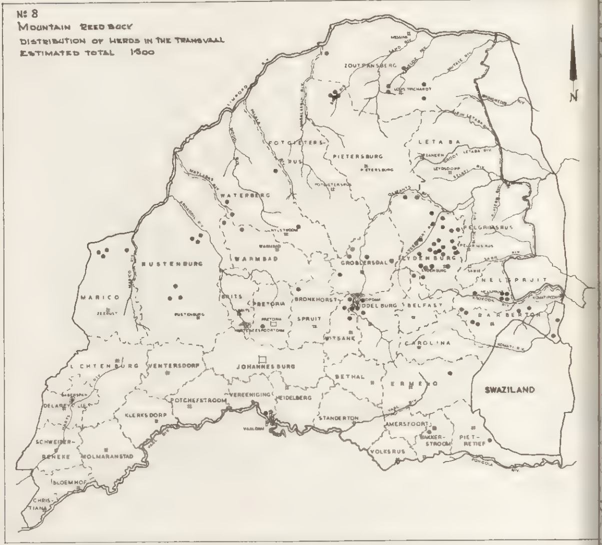
No 7
GREY RHEBUCK
DISTRIBUTION OF HERDS IN THE TRANSVAAL
ESTIMATED TOTAL 2000

with the heaviest population in the Lydenburg district and the central area where the Waterberg, Warmbaths and Rustenburg districts join. They do not seem to occur in the Soutpansberg range. They are restricted to areas south of the 24th latitude and occur at altitudes above 4,000 ft., preferring the mist belt just above the habitat of the Mountain Reedbuck.

It is hard to establish their numbers but it is estimated that there are not more than 2,000 in the Transvaal. (Fig. No. 7).

MOUNTAIN REEDBUCK (ROOIRIBBOK) *Redunca fulvorufula*

This animal is encountered in all regions in the Transvaal where the necessary altitude

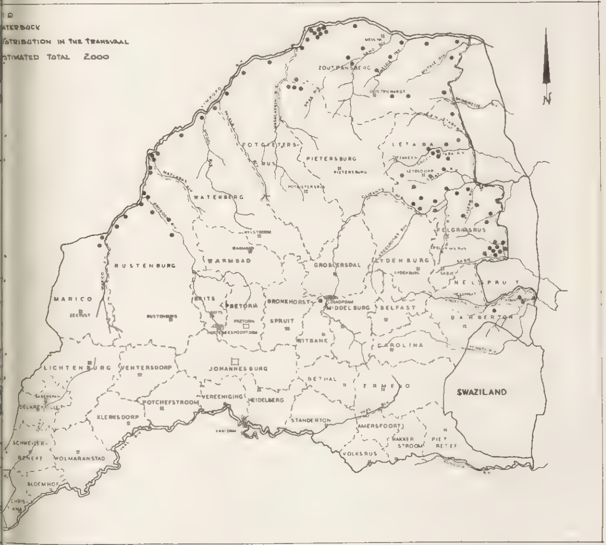


Nº 8
MOUNTAIN REED BUCK
DISTRIBUTION OF HERDS IN THE TRANSVAAL
ESTIMATED TOTAL 1500

and ruggedness prevail. The thickest population occurs in the north-eastern highveld with Lydenburg and Middelburg districts as the centre. Their preferred habitat seems to be between 4,000 and 4,500 ft. altitude and some are also found at 3,000 ft. in the Barberton district. The areas just below the mist belt seem to be their favourite haunts. (Fig. No. 8).

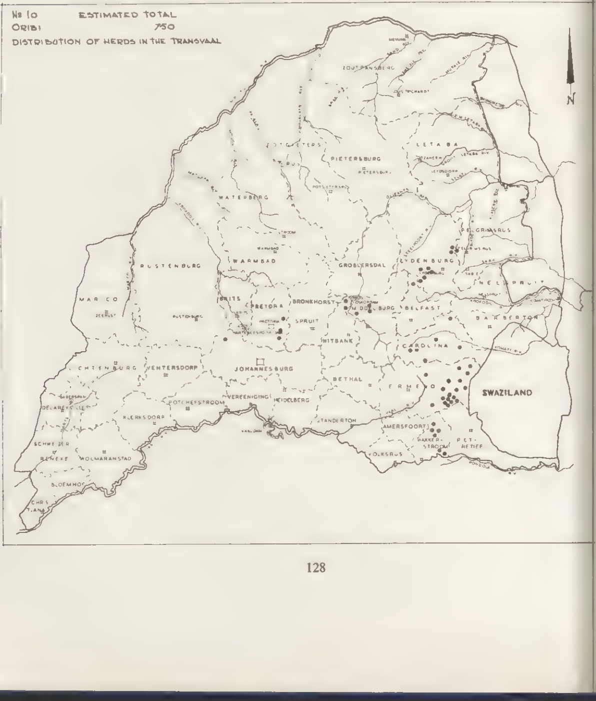
WATERBUCK *Kobus ellipsiprymnus ellipsiprymnus*

This species occurs in small numbers in the northern part of Marico district. In the Rustenburg district they are found in fair numbers along the rivers, especially so at the confluence of the Marico-Crocodile and at the Matlabas–Crocodile junction. In the



Waterberg and Potgietersrust districts they are scarce. In the Pietersburg district on the Blouberg Private Nature Reserve they are quite numerous and under strict protection. In the Soutpansberg district, especially along the Limpopo, they become more plentiful. The thickest populations occur in the Letaba and Pilgrim's Rest districts where the buck are plentiful on quite a number of farms. Their southern limit is in the Barberton district where they are scarce. There are no Waterbuck in the southern and central Transvaal, except on the Loskopdam Nature Reserve where they were introduced.

It can be stated that there are not less than 2,000 head in the Transvaal. (Fig. No. 9).



ORIBI *Ourebia ourebi ourebi*

The distribution of this animal is more or less in the eastern highveld, the Ermelo district having the highest population. They are also found in the Middelburg, Witbank, Bronkhorstspruit and Pretoria districts. On the farm Uitkomst, close to Krugersdorp, there are about 40 which are kept in a properly fenced reserve and enjoy strict protection. They occur on the grassveld in the Transvaal although it is known that they used to be present in the southern lowveld where they have since disappeared. There are about 750 Oribi in the province. (Fig. No. 10).

ELAND *Taurotragus oryx oryx*

Apart from small herds on the Molongo Flats and in the Shingwedzi area in the north-eastern corner of the Transvaal, there are quite a number of farmers who have small but established herds. In 1953 the estimated number was not more than 75 head. In 1961 the number is well over 100. These herds were all introduced and are settled so that they may be expected to increase at a faster rate than before. The north-eastern herds are the only ones in the natural state. Most of the others are on fenced farms and are treated like domestic animals. (Fig. No. 11).

GEMSBOK *Oryx gazella*

The Gemsbok position is very grave and their total disappearance can hardly be stopped. On the Langjan Nature Reserve they have been steadily decreasing mainly because they were not properly fenced. Several attempts have been made to establish a herd on the S. A. Lombard Nature Reserve without success. Apart from those in zoos, there are only 15 Gemsbok in the Transvaal. (Fig. No. 11).

NYALA *Nyala angasi angasi*

This species is now found in the north-eastern corner of the Transvaal, in the Lydenburg district and on the Loskopdam Nature Reserve. The latter were introduced. The future of those in the wild state is very uncertain. They still do not exceed the 100 mark and are virtually extinct outside the Kruger National Park and Loskopdam Reserve. (Fig. No. 11).

THE RED HARTEBEEST *Alcelaphus caama caama*

The Red Hartebeest is also on the downgrade. A natural herd in the Marico district is slowly declining on account of consecutive droughts over the last few years. There are small herds scattered through the Rustenburg, Waterberg and Potgietersrust districts. The herd on the S. A. Lombard Nature Reserve does not seem to do well. We will, however, endeavour to establish a herd on the Langjan Nature Reserve. The total number in the Transvaal does not exceed 200. (Fig. No. 11).

TSESSEBE *Damaliscus lunatis lunatis*

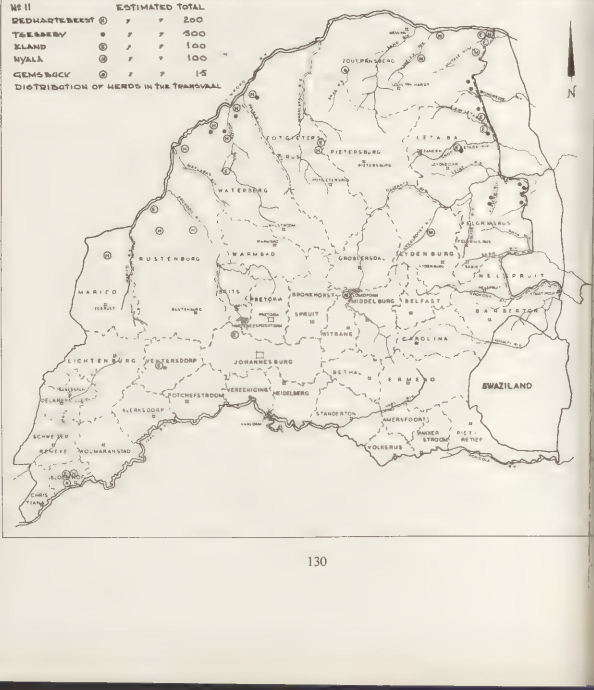
Tsessebe are still scarce in the Transvaal, and new disease factor has made their future even more doubtful. Since 1953 their numbers have decreased although the distribution remains more or less the same. They are sparsely distributed along the boundary of the Kruger National Park from the Shingwedzi area southwards to the Letaba River. In the Pilgrim's Rest district they are scattered on the farms, Fleur de Lys, Moriah and Buffelshoek having the highest populations. Smaller scattered herds are found in the Waterberg and Potgietersrust districts. There are not more than 500 in the Transvaal. (Fig. No. 11).

Roan Antelope *Ozanna equina equina*

This antelope may be considered extinct unless some of them can be properly protected in a suitably fenced reserve. Some of the herds which were known in 1953 have gradually disappeared, while other small herds linger on in the New Belgium Block in the Waterberg district and on some farms in the Pilgrim's Rest district. The small herd in the Barberton district has disappeared. The estimated number in the Transvaal does not exceed 100. (Fig. No. 12).

Sable Antelope *Ozanna grandicornis grandicornis*

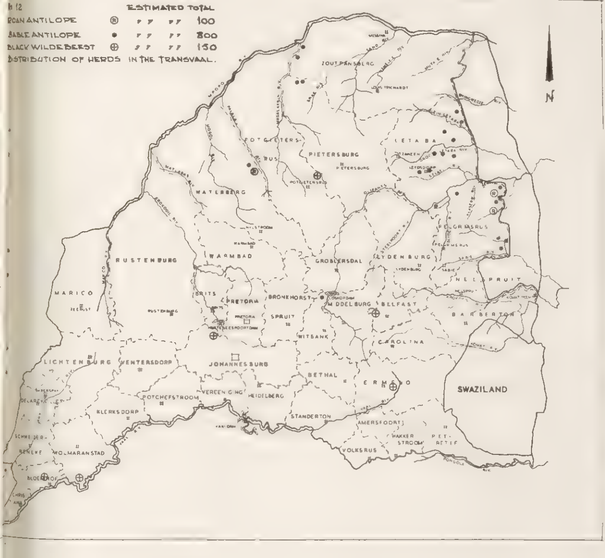
The natural areas where this species is found are slowly giving way to agricultural



pursuits. Consequently numbers are dwindling. The distribution remains much as in 1953, with herds in the Pietersburg, Soutpansberg, Letaba and Pilgrim's Rest districts. A small herd (too young to breed) has been taken to Loskopdam but it is not known whether they will become established. It is said that there are still some Sable in the New Belgium Block in the Waterberg district, but I have not seen them yet. The total number in the Transvaal does not exceed 800. (Fig. No. 12).

BLACK WILDEBEEST OR WHITE TAILED GNU *Connochaetes gnou*

During 1945 there was only one herd of 46 on the farm Heuningkrans in the Wol-

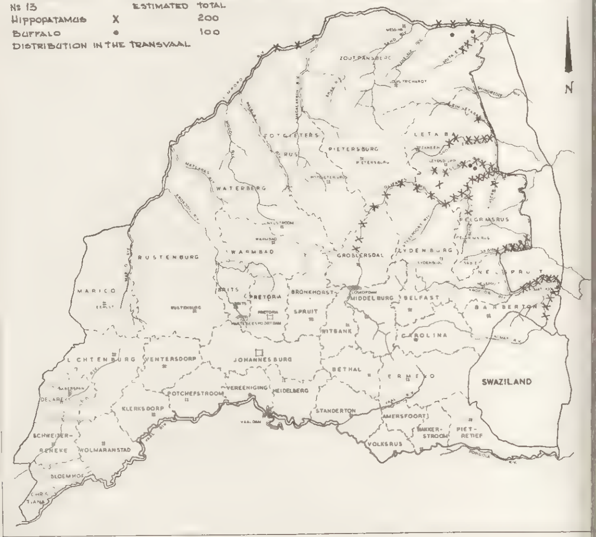


maransstad district. In 1949 the late owner, Mr. Hoffman graciously donated twelve of these rare animals to the Transvaal Provincial Administration. These were taken to the S.A. Lombard Nature Reserve near Bloemhof.

Most of the present herds in the Transvaal originated from this herd, although some came from the Free State.

The number of black wildebeest in the Transvaal now number approximately 150. They are divided into 7 herds, and are well established. At least 40 excess bulls have been removed during the last 7 years to increase the breeding capacity. (Fig. No. 12).

Nº 13

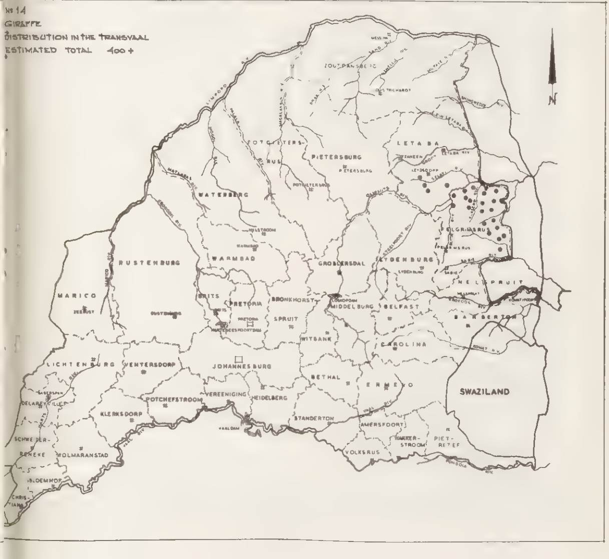


BUFFALO *Syncerus caffer caffer*

Small herds occur in the eastern Soutpansberg, Letaba and Pilgrim's Rest districts. Occasional infiltrations occur along the boundary of the Kruger National Park. Buffalo disease in cattle, in the areas where Buffalo occur, makes their existence in the Transvaal precarious. The total number does not exceed 100. (Fig. No. 13).

HIPPOPOTAMUS *Hippopotamus amphibius capensis*

There are only a few Hippopotami in the western Limpopo. In the eastern Soutpansberg district they occur in the Limpopo, Mutali and Levubu Rivers. In the Letaba district they


No 14
GIRAFFE
DISTRIBUTION IN THE TRANSVAAL
ESTIMATED TOTAL 400 +

are found in the Klein Letaba, Great Letaba, Selati and Olifants Rivers. In the Pilgrim's Rest district, in the Klaserie, Blyde, Sabie and the lower Sand Rivers. In the Barberton district they are in the Komati River. The northern boundary of the district is the Crocodile River, where they are also found, but this river which forms the boundary of the Kruger National Park is actually in the Park. In the Groblersdal and Lydenburg districts they are found in the Olifants River. An occasional Hippo goes up the Steelpoort River in the Lydenburg district.

It is most difficult to estimate their numbers; it can, however, be said that there are about 200 in the Transvaal. (Fig. No. 13).

GIRAFFE *Giraffe camelopardalis camelopardalis*

At present this animal is found only in the Letaba and Pilgrim's Rest districts with the highest density in the latter. There seem to be a tendency lately for Giraffe to move southwards. A number of years ago they were very scarce in the southern parts and hardly ever crossed the Sand River. Lately they have become quite numerous between the Sand and the Sabi Rivers and have even moved as far as the Sabi River.

Because Giraffe sometimes break fences in cattle areas, they are becoming less popular with some owners. It is, however, encouraging to note that some of the biggest cattle ranches are protecting these animals.

There has been a decrease in their numbers since 1953. It is difficult to estimate their numbers as they move about quite a lot, but I would say that there are more than 400 in the Transvaal. A herd on the south bank of the Letaba was introduced into that area. (Fig. No. 14).

STEENBOK *Raphicerus campestris campestris*

This species is most adaptable and thrives anywhere in the Transvaal from the cold highveld to the warm lowveld, except on the higher mountain ranges and close to inhabited centres. I do not know how many there are in the province; I do not even want to take a guess.

GREY DUIKER *Sylvicapra grimmia grimmia*

This species is found practically everywhere in the Transvaal where the necessary bush cover exists and is at home on both the highveld and lowveld. Near populated centres these animals have become nocturnal and are holding their own like Kudu. No estimate of their numbers is possible.

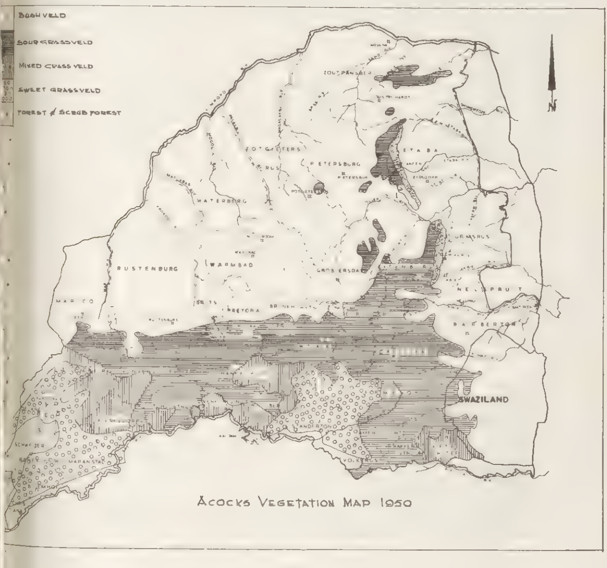
BUSHBUCK *Tragelaphus scriptus*

These buck are distributed north of the 26th latitude where the necessary dense riverine habitat exists, and in the Pongola area between Swaziland and the Natal border. In the subtropical belt and other areas where crops are cultivated under irrigation, they are slowly being exterminated on account of their nocturnal raiding habits. In areas where they do no damage, they can hold their own against heavy hunting pressure. Their numbers cannot be estimated.

I find Acock's vegetation map (1950) a valuable guide to the distribution of ungulates in the Transvaal.

The three dominant highveld species Springbok, Blesbok and Black Wildebeest were encountered on the sweet, mixed and sour grassveld. Of the three species I consider the Springbok the most selective. The densest population of Springbok occurs on the sweet grassveld which they prefer, although they also occur on the mixed and sour grassveld, but in smaller numbers.

The Blesbok seems to thrive anywhere and has the densest population on sour grassveld. Where artificially introduced into the bushveld and even lowveld areas Blesbok seem to adapt themselves without any difficulty. The early introduction (1933) in the northern area was done by Mr. Percy Fyfe on the farm Lunsklip (Percy Fyfe Nature Reserve). These Blesbok were brought from the Free State and were introduced to the only little spot of sour grassveld in the surrounding bushveld (exactly the type of country they prefer). This is a known heartwater area, but the Blesbok survived and are still doing well. More than 1,000 Blesbok have been distributed from this Reserve into the northern bushveld and lowveld area where they are again doing well.



ACOCKS VEGETATION MAP 1950

The distribution of Kudu coincides with Acock's Bushveld; even in the northern parts where patches of sour grassveld occur, Kudu are non-existent. This also applies to Impala, Blue Wildebeest and Zebra, but most of the last two species have already been cleared from their natural stamping grounds and in their present distribution do not demonstrate this fact as clearly as the Kudu does.

The present distribution of the Oribi coincides with Acock's grassveld, although it is known that they did occur in the southern lowveld.

The original distribution patterns were related to habitat requirements, but present distribution depends on the animal's ability to survive, and its economic and aesthetic values.

It is clear that the Eland, Roan and Hartebeest are slowly disappearing because they are easy to hunt and the meat is palatable. They are considered stupid buck by hunters. Next on the list will be the Zebra and Wildebeest. They compete with cattle as far as their feeding habits are concerned and they are also carriers of certain contagious cattle diseases. The Zebra has very little economic value at present.

The Impala has great economic value but it is not easy to keep them within ordinary fences and they can, therefore, not be properly protected. The Kudu, on account of its mobility and camouflage, can hold its own against heavy hunting pressure. The Blesbok and Springbok can easily be kept within ordinary fences and therefore enjoy protection. They also have high economic value. Nocturnal animals, like Bushbuck, Steenbok and to a certain extent Duiker, can survive under heavy pressure. The Oribi has become an animal of aesthetic value and is more or less protected by everyone. Although it is easy to hunt and has palatable meat, it still survives.

Where new areas are opened for agriculture the distribution of ungulate mammals will follow a definite pattern. The original distribution will shrink up to a certain point and then a new pattern will develop with artificial restocking, the extent of which will depend upon availability, adaptability and economic value of the animal. Blesbok and Eland have so far proved that they are adaptable. Because they are of economic value and are easily caught and transported, their new distribution pattern will cover the whole of the Transvaal.

The distribution pattern of most "game" ungulates will therefore undergo a continuous change in the development of the country.

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DISCUSSION

Mr. Attwell: The possible influence of fences in disturbing the natural movements of ungulates and thus intensifying or creating new spheres of interspecific competition has been mentioned earlier. Farming and fencing also introduce competition between the indigenous fauna and domestic animals. North of the Limpopo, there is a considerable body of opinion which opposes the introduction of domestic animals into marginal lands, but favours instead the "farming" and intermittent cropping of the indigenous ungulates already occupying these areas. Is it possible that the Provincial Administrations in South Africa might encourage a similar policy here, more especially in respect of poor farming land overstocked with domestic animals?

Mr. Kettlitz: I would very much like to support this suggestion but there are certain practical difficulties. In the Transvaal for instance, there are no vacant State lands, apart from the Bantu Reserves, and I do not think that either the Province or the State will be able to persuade private landowners to clear domestic stock from their properties.

Possibly the best method of achieving the desired result is to educate farmers to the potential economic value of game. In this connection, I wish to suggest that we should not too hastily condemn the introduction of game animals into areas where they are not known to have existed before. With the exception of the Oribi, I know of no game animal which is protected by farmers purely for its aesthetic value. But the more plastic and adaptable animals can be profitably farmed in many areas, an example being the Blesbok. With forms like the Kudu, however, which no fence will hold, the situation is more difficult.

Mr. Grindley: It has been shown in Tanganyika and elsewhere that a greater weight of meat per unit area can be produced when indigenous ungulates, rather than domestic stock are farmed. Could this not be used as an argument in the education of the farming community?

Dr. Winterbottom: Many farmers say that their endeavours to protect or farm game animals have involved them in losses because of widespread poaching.

Dr. Omer-Cooper: Others complain that the law is such that they are not allowed to sell the meat which they produce.

Dr. Bigalke: This is probably the first time that such a comprehensive set of information on South African ungulates has ever been brought together, and it has shown where our weak spots are. I suggest that this Society should ask the Provincial Administrations to give further attention to both the farming and conservation of these animals, especially rare forms. (A resolution to this effect was later adopted at the Annual General Meeting of the Society–Eds.).